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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,869	06/14/2005	Yasumasa Watanabe	4706-03	5889
23117	7590	06/02/2006	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			RABAGO, ROBERTO	
			ART UNIT	PAPER NUMBER

1713

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/538,869

Applicant(s)

WATANABE ET AL.

Examiner

Roberto Rábago

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-7 and 17 is/are allowed.
- 6) ☒ Claim(s) 1 and 8-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Prior rejection under 35 USC 112 is withdrawn in view of argument. Prior rejection under 35 USC 102 is withdrawn in view of amendment which has narrowed the claims to exclude processes which include cross linking of the copolymer.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 8-10 and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinoshita et al. (US 4,943,658).

The reference discloses a method for modifying an ethylene/olefin copolymer by adding oxygen-containing functional groups for the purpose of making a formulating agent for lubricating oil (col. 1-2). Hydroxyl modification is disclosed at col. 3, lines 29-31, and the adjunct use of a peroxide such as t-butyl hydroperoxide is disclosed at col. 5, lines 14-16. The process is to be performed at from 100°C to 250°C, which includes a broad range of temperatures between the required half-life temperatures of the suggested hydroperoxide. One of ordinary skill in the art would immediately envisage a value within the claimed percentage of hydroperoxide because applicants have set forth

a broad range of conventional values. Therefore, one of ordinary skill in the art would be motivated to use the claimed invention because the reference has suggested all of the required components from a reasonably small set of alternative embodiments. Reasonable success would be expected because patentees have suggested that a useful modified copolymer would result.

The reference has not reported the Mooney viscosity; however, this parameter would appear to inherently result from using the process of the reference because applicants have set forth an exceedingly broad range. The burden of proof is shifted to applicants to show that the copolymers of the reference would not have the claimed viscosity.

Regarding claims 8 and 9, which include the product-by-process limitation regarding a radical generator, there is nothing on this record which would indicate that the presence of this additional process component would preclude the reference polymers from the scope of the claims. The specification appears to include the radical generator primarily for the purpose of decreasing the process temperature, rather than to result in any specific polymer property; furthermore, process claim 2 allows the radical generator to be present in such a trivial quantity as to have essentially no effect on the process or the copolymer.

4. Claims 1 and 8-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Funaki et al. (US 20020119319).

The reference discloses making ethylene copolymer mixed with a peroxide in a melt extruder at elevated temperature (Examples 3 and 7). Although unexemplified, the reference suggests the use of alternative peroxides such as methyl ethyl ketone peroxide and hydroperoxides such as t-butyl hydroperoxide (paragraphs [0017]-[0020]), and therefore one of ordinary skill in the art would be motivated to use the alternatives.

The reference has not reported the Mooney viscosity; however, this parameter would appear to inherently result from using the process of the reference because applicants have set forth an exceedingly broad range. The burden of proof is shifted to applicants to show that the copolymers of the reference would not have the claimed viscosity.

Regarding claims 8 and 9, which include the product-by-process limitation regarding a radical generator, there is nothing on this record which would indicate that the presence of this additional process component would preclude the reference polymers from the scope of the claims. The specification appears to include the radical generator primarily for the purpose of decreasing the process temperature, rather than to result in any specific polymer property; furthermore, process claim 2 allows the radical generator to be present in such a trivial quantity as to have essentially no effect on the process or the copolymer.

5. Claims 2-7 and 17 are allowed over the references currently of record.

Regarding JP 9-77826 cited as "X" on the ISR, this reference does not anticipate or

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render obvious the claimed invention because the temperatures recommended are not within the required range of between the 10-hour and 1-hour half-life temperatures.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

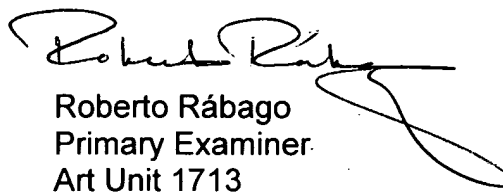
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rábago whose telephone number is (571) 272-1109. The examiner can normally be reached on Monday - Friday from 8:00 - 4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Roberto Rábago
Primary Examiner
Art Unit 1713

RR
May 26, 2006